

What is claimed is:

sub A 1. A tire forming system including a band forming machine, a shaping forming machine and a belt/tread forming machine, in each of which setting conditions of a tire size can be optionally changed, and having transport means for delivering a semi-fabricated product to each forming machine, wherein as means for supplying a band member there are provided:

(1) inner liner supply means for cutting a sheet-like inner liner material having a width, in which a splice margin is added to a band periphery length, to a length corresponding to a specification width of a formed tire, and supplying the cut inner liner to the band forming machine;

(2) carcass supply means for cutting a sheet-like carcass material having a width, in which a splice margin is added to a band periphery length, to a length corresponding to a specification width of the formed tire, and supplying the cut carcass to the band forming machine;

(3) band rubber parts supply means for injecting a rubber strip from an injection unit, winding the rubber strip around a drum of the band forming machine, and forming, on the basis of its laminated structure, a rubber parts having a profile corresponding to a

specification of the formed tire; and

(4) bead supply means for supplying a completed bead corresponding to a specification of the formed tire to the band forming machine through a bead setter; and

5 as means for supplying a belt/tread member there are provided:

(5) belt supply means for cutting a strip-like belt material, in which plural cords are arranged and rubberized, to predetermined length and angle, mutually
10 splicing edge portions of the plural cut strip pieces to form a belt for one tire, which has a length, a cord angle and a width corresponding to specifications of the formed tire, and supplying the belt to the belt/tread forming machine; and

15 (6) tread rubber parts supply means for injecting a rubber strip from an injection unit, winding the rubber strip around a drum of the belt/tread forming machine, and forming, on the basis of its laminated structure, a rubber parts having a profile corresponding to a
20 specification of the formed tire.

2. A tire forming system set forth in claim 1, wherein the bead supply means holds plural kinds of completed beads each having a bead core corresponding to the band periphery length, selects the completed bead
25 corresponding to the specification of the formed tire

from the plural kinds of completed beads, and supplies the selected completed bead to the band forming machine through the bead setter.

4bA2 3. A tire forming system set forth in claim 1,
5 wherein the injection unit is a plunger type injection unit in which there is accommodated, for every parts, a rubber amount corresponding at least to the specification of the formed tire.

10 4. A tire forming system set forth in claim 2, wherein the injection unit is a plunger type injection unit in which there is accommodated, for every parts, a rubber amount corresponding at least to the specification of the formed tire.

15 5. A tire forming method using a tire forming system including a band forming machine, a shaping forming machine and a belt/tread forming machine, in each of which setting conditions of a tire size can be optionally changed, and having transport means for delivering a semi-fabricated product to each forming
20 machine, wherein as a process for supplying a band member there are provided:

(1) an inner liner supply process for cutting a sheet-like inner liner material having a width, in which a splice margin is added to a band periphery length, to a
25 length corresponding to a specification width of a formed

tire, and supplying the cut inner liner to the band forming machine;

(2) a carcass supply process for cutting a sheet-like carcass material having a width, in which a splice margin is added to a band periphery length, to a length corresponding to a specification width of the formed tire, and supplying the cut carcass to the band forming machine;

(3) a band rubber parts supply process for injecting a rubber strip from an injection unit, winding the rubber strip around a drum of the band forming machine, and forming, on the basis of its laminated structure, a rubber parts having a profile corresponding to a specification of the formed tire; and

(4) a bead supply process for supplying a completed bead corresponding to a specification of the formed tire to the band forming machine through a bead setter; and

as a process for supplying a belt/tread member there are provided:

(5) a belt supply process for cutting a strip-like belt material, in which plural cords are arranged and rubberized, to predetermined length and angle, mutually splicing edge portions of the plural cut strip pieces to form a belt for one tire, which has a length, a cord angle and a width corresponding to specifications of the

formed tire, and supplying the belt to the belt/tread forming machine; and

(6) a tread rubber parts supply process for injecting a rubber strip from an injection unit, winding the rubber strip around a drum of the belt/tread forming machine, and forming, on the basis of its laminated structure, a rubber parts having a profile corresponding to a specification of the formed tire.

6. A tire forming method set forth in claim 5, wherein, in the bead supply process, plural kinds of completed beads each having a bead core corresponding to the band periphery length are prepared, the completed bead corresponding to the specification of the formed tire is selected from the plural kinds of completed beads, and the selected completed bead is supplied to the band forming machine through the bead setter.

16A3 7. A tire forming method set forth in claim 5, wherein the injection unit is a plunger type injection unit in which there is accommodated, for every parts, a rubber amount corresponding at least to the specification of the formed tire.

8. A tire forming method set forth in claim 6, wherein the injection unit is a plunger type injection unit in which there is accommodated, for every parts, a rubber amount corresponding at least to the specification

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